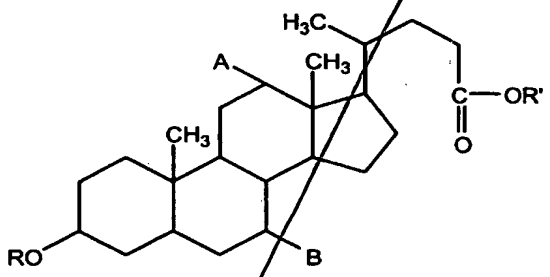
What is claimed is:

1. An additive of following Formula 1 for a photoresist composition for a resist flow process:

Formula 1



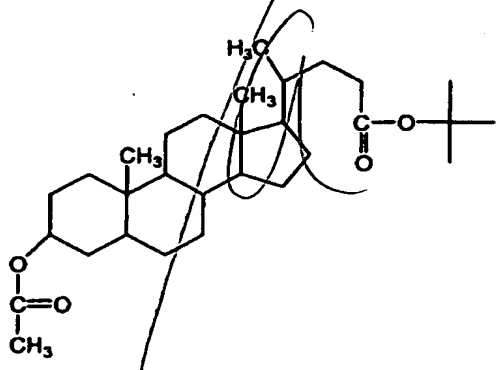
wherein, A is H or –OR",

B is H or –OR"', and

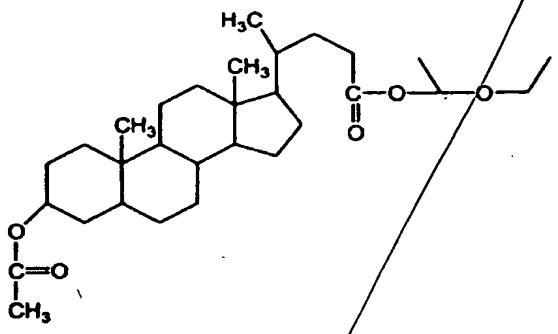
R, R', R" and R"' are independently selected from the group consisting of C_1-C_{10} alkyl, C_1-C_{10} alkoxyalkyl, C_1-C_{10} alkylcarbonyl, and C_1-C_{10} alkyl containing at least one hydroxyl group (-OH).

2. The additive of claim 1 wherein the additive is selected from the group consisting of compounds of following Formulas 2 to 7:

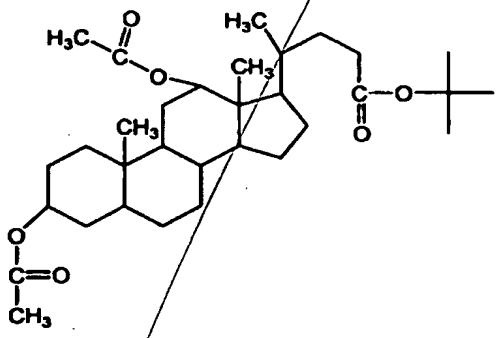
Formula 2



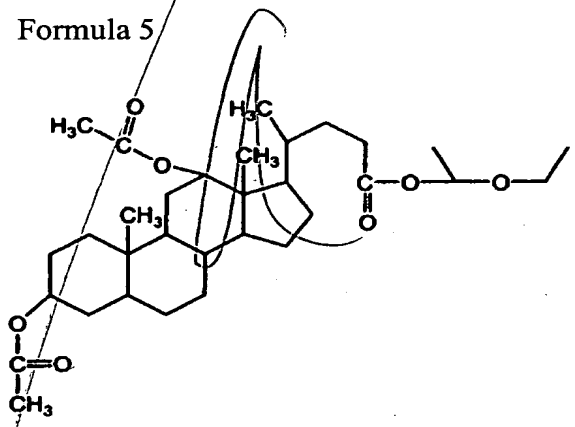
Formula 3



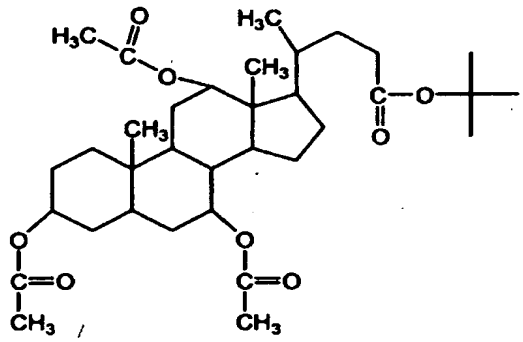
Formula 4



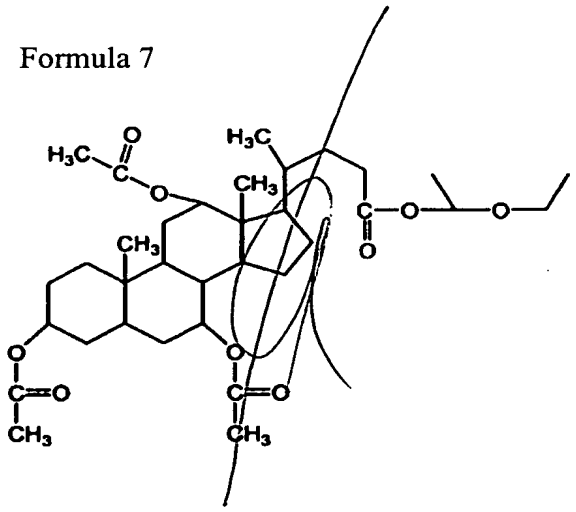
Formula 5



Formula 6



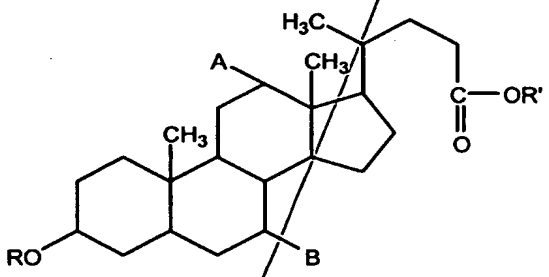
Formula 7



3. A photoresist composition comprising:

a photoresist polymer, a photoacid generator, an additive of following Formula 1, and an organic solvent,

Formula 1



wherein, A is H or –OR",

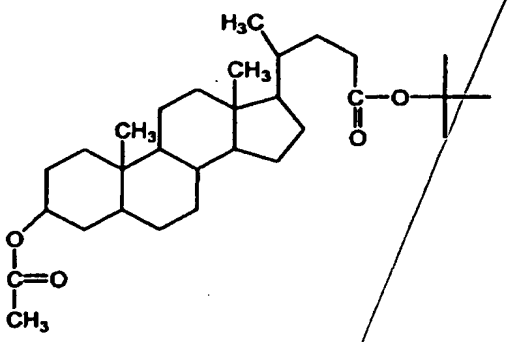
B is H or –OR'", and

R, R', R" and R'" are independently selected from the group consisting of C_1-C_{10} alkyl, C_1-C_{10} alkoxyalkyl, C_1-C_{10} alkylcarbonyl, and C_1-C_{10} alkyl containing at least one hydroxyl group (-OH).

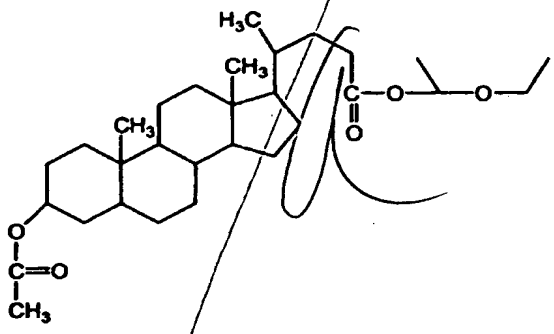
4. A method for forming a photoresist pattern on a substrate comprising forming a layer of the photoresist composition of claim 3 by a resist flow process.

5. The photoresist composition of claim 3 wherein the additive of Formula 1 is selected from the group consisting of compounds of following Formulas 2 to 7:

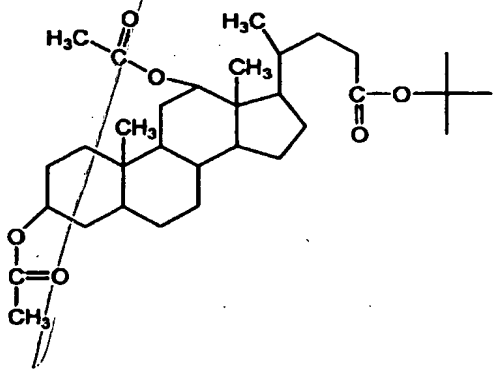
Formula 2



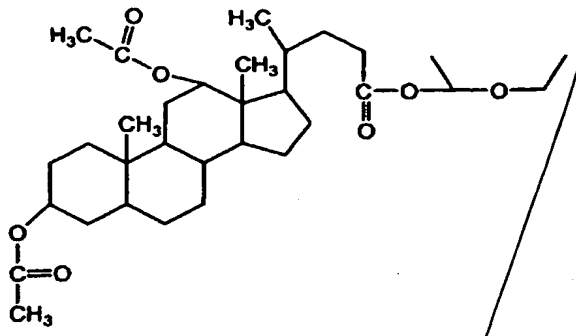
Formula 3



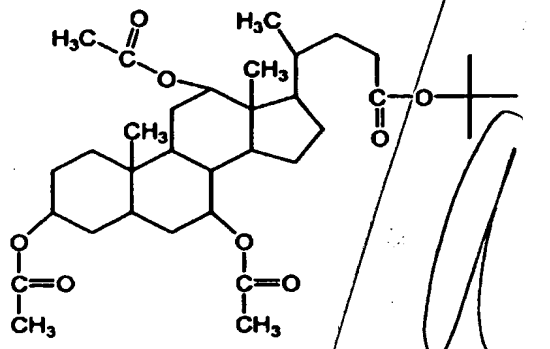
Formula 4



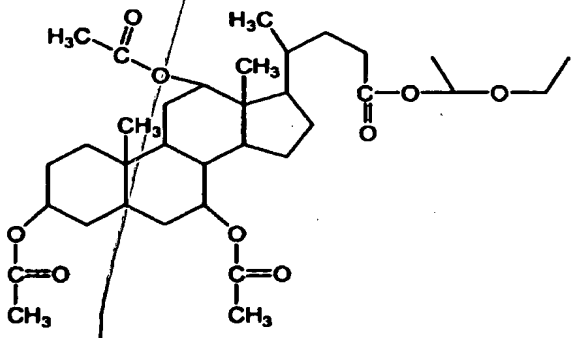
Formula 5



Formula 6

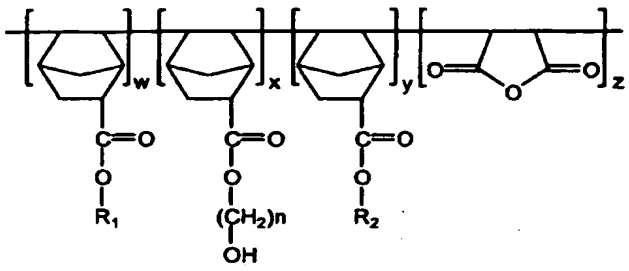


Formula 7

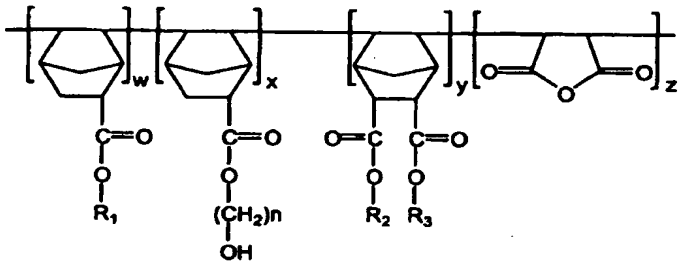


6. The photoresist composition of claim 3 wherein the photoresist polymer is a compound of following Formulas 8 or 9:

Formula 8



Formula 9



wherein, R_1 is and acid labile protecting group;

R_2 is hydrogen;

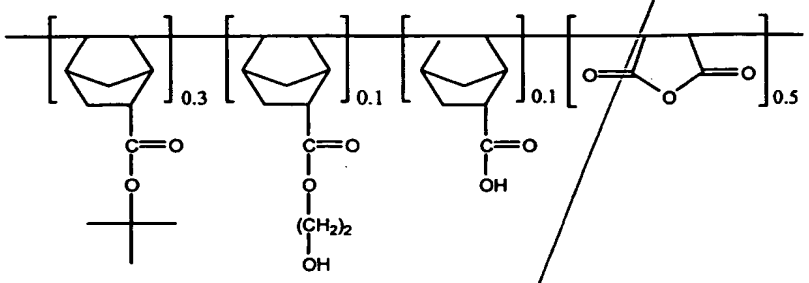
R_3 is hydrogen, selected from the group consisting of C_1-C_{10} alkyl, C_1-C_{10} alkoxyalkyl, and C_1-C_{10} alkyl containing at least one hydroxyl group (-OH);

n is an integer from 1 to 5; and

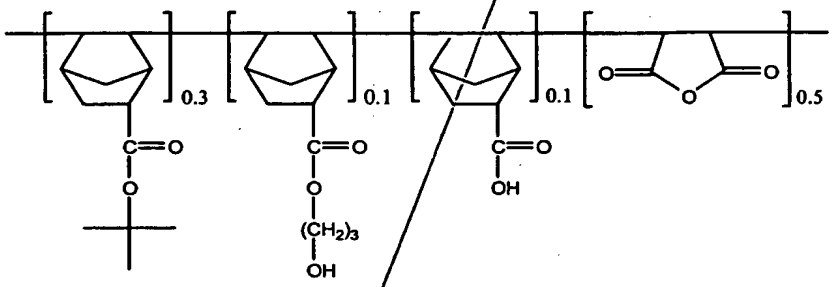
w, x, y and z individually denote the mole ratio of each monomer, preferably with proviso that w + x + y = 50mol%, and z is 50mol%.

7. The photoresist composition of claim 6 wherein the photoresist polymer is selected from the group consisting of compounds of following Formulas 10 to 13:

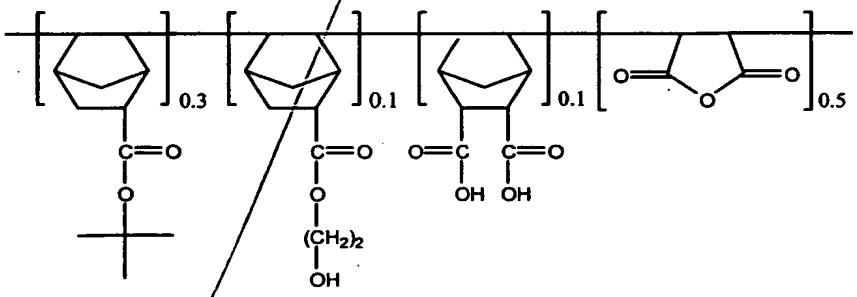
Formula 10



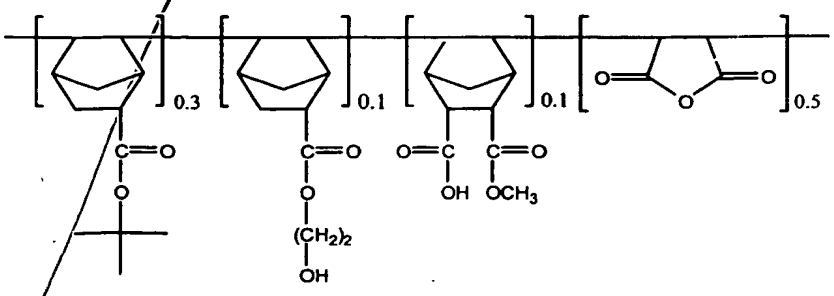
Formula 11



Formula 12



Formula 13



8. The photoresist composition of claim 3 wherein the additive is present in an amount ranging from about 1 to about 70% by weight of the photoresist polymer.

9. The photoresist composition of claim 3 wherein said photoacid generator is selected from the group consisting of diphenyl iodide hexafluorophosphate, diphenyl iodide hexafluoroarsenate, diphenyl iodide hexafluoroantimonate, diphenyl p-methoxyphenyl triflate, diphenyl p-toluenyl triflate, diphenyl p-isobutylphenyl triflate, diphenyl p-tert-butylphenyl triflate, triphenylsulfonium hexafluororphosphate, triphenylsulfonium hexafluoroarsenate, triphenylsulfonium hexafluoroantimonate, triphenylsulfonium triflate, dibutylnaphthylsulfonium triflate, and mixtures thereof.

10. The photoresist composition of claim 3 wherein the photoacid generator is present in an amount ranging from about 0.01 to about 10% by weight of the photoresist polymer.

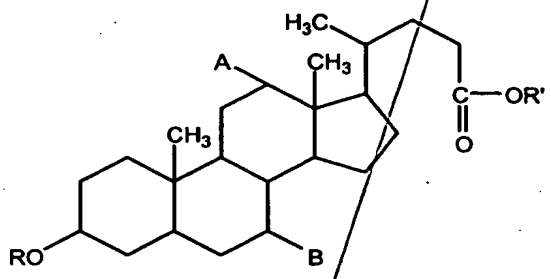
11. The photoresist composition of claim 3 wherein the organic solvent is selected from the group consisting of propyleneglycol methyl ether acetate, ethyl lactate, methyl 3-methoxypropionate, ethyl 3-ethoxypropionate and cyclohexanone.

12. The photoresist composition of claim 3 wherein the organic solvent is present in a range of from about 100 % to about 1000% by weight of the photoresist polymer.

13. A process for forming a photoresist pattern comprising the steps of:

(a) forming a first photoresist pattern on a substrate using a photoresist composition comprising a photoresist polymer, a photo acid generator, an organic solvent, and an additive of following Formula 1:

Formula 1



wherein, A is H or –OR",

B is H or –OR'", and

R, R', R" and R'" are independently selected from the group consisting of C_1-C_{10} alkyl, C_1-C_{10} alkoxyalkyl, C_1-C_{10} alkylcarbonyl, and C_1-C_{10} alkyl containing at least one hydroxyl group (-OH),

and

(b) producing a second photoresist pattern from said first photoresist pattern using a resist flow process.

14. The process of claim 13 wherein said step (a) further comprises the steps of:

(i) coating said photoresist composition on said substrate to form a photoresist film, wherein said substrate is a semiconductor devise; and

(ii) producing said first photoresist pattern using a lithography process.

15. The process of claim 13 wherein said first and second photoresist pattern comprises a contact hole pattern.

16. The process of claim 13 wherein said resist flow process comprises heating said first photoresist pattern to temperature in the range of from about 120 to about 190°C.

17. A semiconductor element manufactured in accordance with the process of claim 13.

18. A semiconductor element manufactured in accordance with the process of claim 14.

19. A semiconductor element manufactured in accordance with the process of claim 15.

20. A semiconductor element manufactured in accordance with the process of claim 16.